ABSTRACT

A Pb-free hot-dip Sn-Zn coated steel sheet having superior corrosion resistance and workability and suitable as a material for an automobile fuel tank is provided, that is, hot-dip Sn-Zn coated steel sheet obtained by forming a hot-dip coating layer comprised of 1 to 8.8 wt% of Zn and the balance of Sn in an amount of 91.2 to 99.0 wt% and unavoidable impurities and/or ancillary ingredients on the surface of steel sheet, the coating surface having Sn dendrite crystals and Sn dendrite arm spacings buried by an Sn-Zn two-way eutectic structure, an area ratio of Sn dendrites in the coating surface being 5 to 90%, and the arm spacing of the Sn dendrites being not more than 0.1 mm, preferably hot-dip Sn-Zn coated steel sheet superior in corrosion resistance and workability having a discontinuous $FeSn_2$ alloy phase at the surface of the steel sheet, having an area ratio of the $FeSn_2$ alloy phase of at least 1% and less than 100%, and having an Sn-(1 to 30wt%)Zn composition on top of that, more preferably having a surface roughness of the discontinuous $FeSn_2$ alloy phase of 0.1 to 2.5 μm in terms of RMS.